# VersaMax 125VDC Isolated Input Modules

Product Description

Discrete input modules IC200MDL631 and BXIOID8125 provide 8 discrete isolated inputs.

Discrete input modules IC200MDL632 (illustrated below) and BXIOID16125 provide 16 discrete isolated inputs.

Inputs can be either positive logic inputs that receive current from input devices and return the current on the return, or negative-logic inputs that receive current from the return and return current to the input device. Input devices are connected between the input terminals and return terminals.
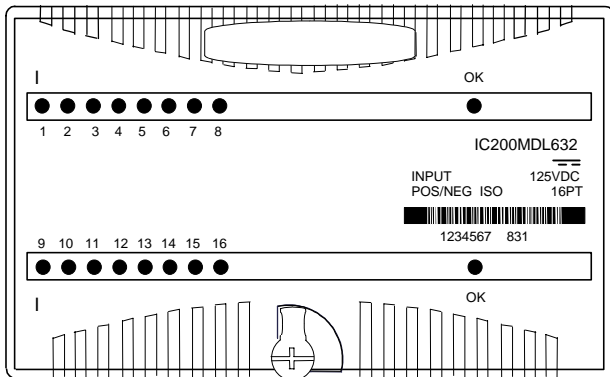
Power for module operation comes from the backplane.

Intelligent processing for the module is performed by the CPU or NIU.

LED Indicators

Individual green LEDs indicate the on/off state of each input point.

The green OK LED is on when backplane power is present to the module.

Preinstallation Check

Carefully inspect all shipping containers for damage. If any equipment is damaged, notify the delivery service immediately. Save the damaged shipping container for inspection by the delivery service. After unpacking the equipment, record all serial numbers. Save the shipping containers and packing material in case it is necessary to transport or ship any part of the system.

Installation in Hazardous Locations

- EQUIPMENT LABELED WITH REFERENCE TO CLASS I, GROUPS A, B, C & D, DIV. 2 HAZARDOUS LOCATIONS IS SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C, D OR NON-HAZARDOUS LOCATIONS ONLY

- WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2;

- WARNING - EXPLOSION HAZARD - WHEN IN HAZARDOUS LOCATIONS, TURN OFF POWER BEFORE REPLACING OR WIRING MODULES; AND

- WARNING - EXPLOSION HAZARD - DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.

Module Characteristics

Points	IC200MDL631, BXIOID8125: 8 isolated inputs
	IC200MDL632, BXIOID16125: 16 isolated inputs
Module ID	IC200MDL631, BXIOID8125: FFFF8004
	IC200MDL632, BXIOID16125: FFFF8004
Isolation:	User input to logic (optical) and frame ground: 250VAC continuous; 1500VAC for 1 minute
	Point to point: 250VAC continuous; 1500VAC for 1 minute
LED indicators	One LED per point shows individual point ON/OFF status OK LED indicates backplane power is present
Backplane current consumption (5V output)	IC200MDL631, BXIOID8125: 40mA maximum
	IC200MDL632, BXIOID16125: 80mA maximum
External power supply	None
Thermal derating	IC200MDL631, BXIOID8125: No derating
	IC200MDL632, BXIOID16125: See chart
Configuration parameters	Input response times

Input Characteristics

Input voltage	0 to +150VDC, +125 VDC nominal
Input voltage	0 to +150VDC, +125 VDC nominal
User input current	1.7mA typ. @ 125VDC, 2.2mA typ. @ 150VDC
Input impedance	74K Ohm typ. @ 125VDC
On state voltage	90VDC to 150VDC
Off state voltage	0VDC to 30VDC
On state current	1.0mA minimum
Off state current	0 to 0.1mA maximum
On response time Off response time	0.5ms maximum
Configurable filter time	0ms, 1.0ms (default), or 7.0ms

Product Revision History

| Rev	Date	Description
IC200MDL631E BXIOID8125E IC200MDL632E BXIOID16125E	October 2008	Updated Power Supply OK signal circuitry.
IC200MDL631D BXIOID8125D IC200MDL632D BXIOID16125D	April 2005	Improvement to latching mechanism
IC200MDL631C IC200MDL632C	April 2004	Changed to V0 plastic for module housing.
BXIOID8125C BXIOID16125C	January 2004	Changed to V0 plastic for module housing. ATEX approval for Group 2 Category 3 applications.
IC200MDL631B IC200MDL632B	January 2004	ATEX approval for Group 2 Category 3 applications.
IC200MDL631A BXIOID8125A IC200MDL632A BXIOID16125A	September 2000	Initial product release

Thermal Derating

No derating is required for the 8-point modules in any orientation, or for the 16-point modules at 125VDC.

For 16-point modules at 150VDC, the number of points that can be on at the same time depends on the ambient temperature, the external voltage, and the orientation of the module and DIN rail, as shown below.

Ambient Temperature

Ambient Temperature
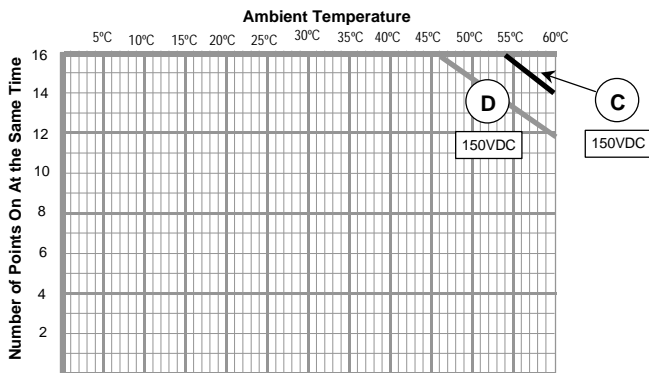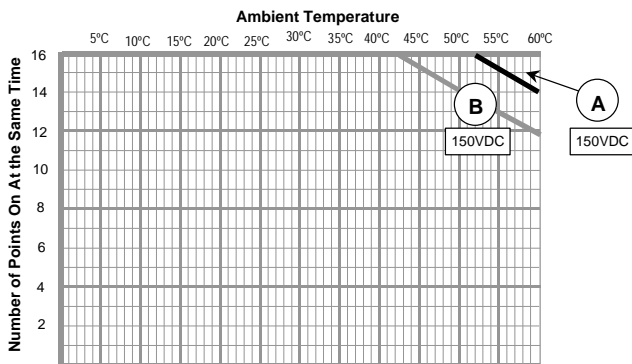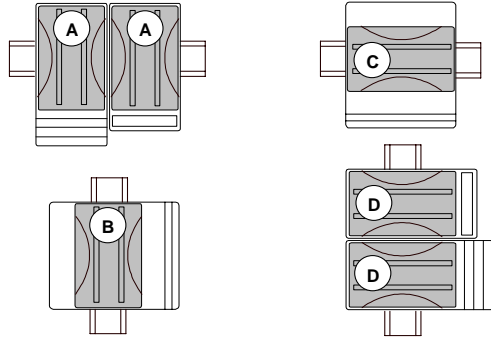
Operating Note

If hot insertion of a module is done improperly, the operation of other modules on the same backplane may be disrupted. See *Installing a Module on a Carrier* in the *VersaMax Modules Manual,* GFK-1504.

Field Wiring Terminals

Terminal	Connection	Terminal	Connection
A1	Input 1	B1	Input 9 *
A2	Input 1 Return	B2	Input 9 Return *
A3	Input 2	B3	Input 10 *
A4	Input 2 Return	B4	Input 10 Return *
A5	Input 3	B5	Input 11 *
A6	Input 3 Return	B6	Input 11 Return *
A7	Input 4	B7	Input 12 *
A8	Input 4 Return	B8	Input 12 Return *
A9	Input 5	B9	Input 13 *
A10	Input 5 Return	B10	Input 13 Return *
A11	Input 6	B11	Input 14 *
A12	Input 6 Return	B12	Input 14 Return *
A13	Input 7	B13	Input 15 *
A14	Input 7 Return	B14	Input 15 Return *
A15	Input 8	B15	Input 16 *
A16	Input 8 Return	B16	Input 16 Return *
A17	No connection	B17	No connection
A18	No connection	B18	No connection

* Inputs available on 16-point modules only.

Using a shorting bar with module IC200MDL631 or BXIOID8125 eliminates its point-to-point isolation characteristics.

Wiring Connections for Carriers with Two Rows of Terminals

Row B connections shown below are for 16-point modules only.
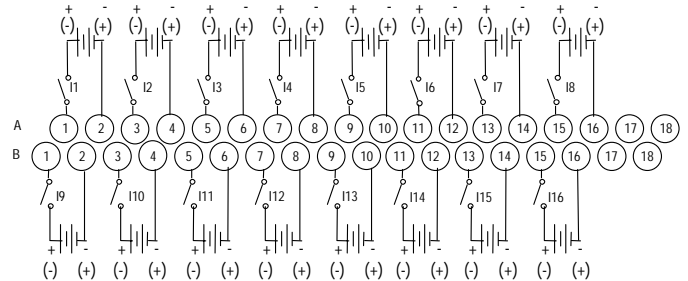
Wiring Connections for Carriers with Three Rows of Terminals

Side B connections shown below are for 16-point modules only.